

WHAT IS CLAIMED IS:

1. A photolithography system comprising:
 - an illumination source configured to produce electromagnetic radiation; and
 - a reticle having reduced thermal load, said reticle comprising:
 - a transparent flat substrate;
 - dielectric lands placed on said transparent flat substrate; and
 - electromagnetic radiation blocking lands placed on said dielectric lands;
 - wherein said dielectric lands have a reflectance greater than about sixty percent,
 - whereby electromagnetic radiation passing through said transparent flat substrate is reflected from said dielectric lands prior to reaching said electromagnetic radiation blocking lands resulting in less energy being absorbed in the reticle and the thermal load being reduced.
2. The photolithography system of claim 1, wherein said dielectric lands of said reticle comprise alternating layers of quarter-wave film of a higher refractive index and a lower refractive index than a refractive index of the transparent flat substrate.
3. The photolithography system of claim 1, wherein said dielectric lands of said reticle are reflective for any predetermined wavelength of electromagnetic radiation from 157 to 365 nanometers.
4. The photolithography system of claim 1, wherein said electromagnetic radiation blocking lands of said reticle are made of chrome.
5. The photolithography system of claim 1, wherein said electromagnetic radiation blocking lands of said reticle are made of aluminum.

6. The photolithography system of claim 1, wherein said transparent flat substrate of said reticle is selected from the group consisting of quartz, fluoride doped quartz, and calcium fluoride.